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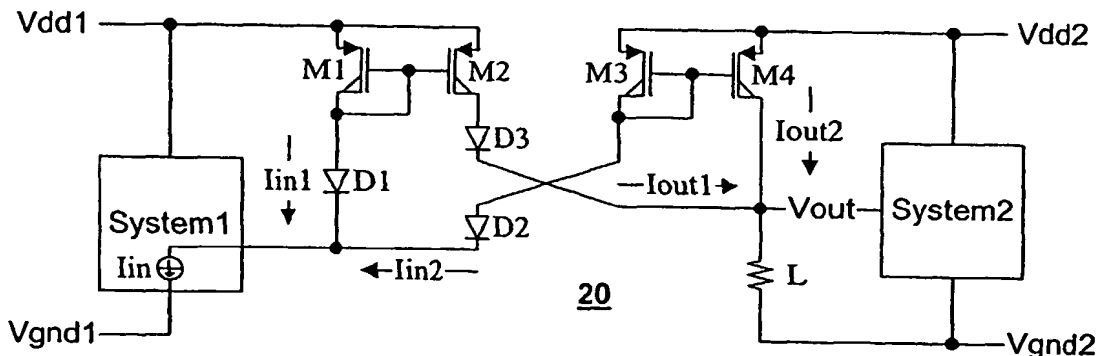
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(54) Title: **LEVEL SHIFTING CIRCUIT BETWEEN ISOLATED SYSTEMS**



(57) Abstract: A level shifting circuit (20, 30) couples an input current ( $I_{in}$ ) from one system to another, isolated, system, by driving a single load ( $L$ ) via one or more current mirrors of a common type. In a first embodiment (20), two similar type (either N-type or P-type) current mirrors ( $M1, M2; M3, M4$ ) provide output current ( $I_{out1}, I_{out2}$ ) to a common load. Diodes ( $D1, D2$ ) are used to split the input current ( $I_{in1}, I_{in2}$ ) between the two current mirrors during normal, non-faulty conditions, and to turn off either one of the two current mirrors during a fault condition to permit proper operation in the presence of a fault. In a second embodiment (30), a single current mirror ( $M1, M2$ ) mirrors the input current ( $I_{in}$ ) to the output load ( $L$ ), and a pair of diodes ( $D1, D2$ ) selects which of the isolated systems to use as the power source in the event of a fault.